
XXIII. *Upon the different Species of esculent Strawberries.* By
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BEFORE I enter upon the immediate subject of the following communication, it will be necessary that I define precisely the meaning which I annex to the word species; as that appears to me to be often used somewhat vaguely and licentiously by writers upon botanical subjects. By a species of plants, I mean all plants which can be made to breed together without producing mules; that is, without producing plants which are incapable of affording offspring by seeds: and I consider all plants to be of distinct and different species which cannot be made to breed with each other (if capable of breeding at all), or which, if they intermix, produce mule plants. The peach and nectarine tree have, under my care, bred very freely with the bitter-almond tree; and the offspring do not appear to be mule plants: and I am therefore disposed to question the specific difference of the *Amygdalus communis* and *A. persica*. Similar experiments have led me to doubt the specific difference of the cultivated plum and sloe; and I possess several varieties of the willow, which are not mules, and which appear to have derived their existence from seeds of the *Salix Russelliana*, and the pollen of the *S. alba*; and therefore I am much disposed to question the claims of many of the intermediate supposed species to their present titles.

Many plants of the following species and varieties of strawberries

berries were planted in pots, in different successive seasons, for the purpose of experiment:—the common wood, the white alpine, the Duke of Kent's, or wood-strawberry of Canada, the common scarlet, the Bath scarlet, the pine, the black, the white Chili, and the hautbois, with some others which proved to be varieties of the common scarlet, but to which no particular name had been given. The pollen of the Wood-strawberry was introduced into blossoms of the White alpine, from which the stamina had some days previously been extracted in an immature state. Abundant seeds were produced, which afforded offspring generally similar to their male parent in taste, flavour, and colour. The wood-strawberry of Canada, the common scarlet, the Bath scarlet, the pine, the black, and the white Chili afforded under similar circumstances abundant offspring, however crossed, and the offspring presented every intermediate shade of character between these varieties; but none of them would intermix with the wood or white alpine. The Hautbois did not breed with any of the preceding varieties, except in one instance with the Bath scarlet, from the seeds of which I obtained plants which proved apparently to be mules. I preserved these several years, in which they made feeble and always abortive efforts to produce blossoms. In external character all of these a good deal resembled the hautbois in foliage and general habit; and two of them were not readily distinguishable from plants of that species.

The preceding results, therefore, lead me to conclude that our gardens contain three, and three only, distinct species of strawberry, one of which has sported very widely in varieties.

I much wish that some members of this learned Society would make experiments, similar to those above stated, upon the different species and varieties of plants now comprehended within the genus *Rosa*, *Salix*, *Pelargonium*, and others. Many of the sup-

posed species of each of the preceding genera would, I am very confident, be found capable of breeding with, and being transmuted into, each other, as to their external characters; and if botanical writers still choose to call such species, they ought certainly to distinguish them from others, as secondary or transmutable species. The external form and character of each plant, as it came from the hand of nature, was probably sufficiently peculiar to render it readily distinguishable from those of every other species: but varieties of soil, of climate, and of culture applied for other purposes, have so far mixed and confounded the primary characteristics of many species, that experiments, such as those above described, now afford probably the only source of decisive evidence.